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1	BRS	L4	1	"5905568".pn.	USPAT	2006/01/30 09:41	
2	BRS	L5	0	(bunch near2 graph near3 (match\$3 or similar\$5)) same (fluid\$1 or water or particle\$1)	USPAT	2006/01/30 09:43	
3	BRS	L6	0	(bunch near2 graph near3 (match\$3 or similar\$5)) same (fluid\$1 or water or particle\$1)	US- PGPUB; USPAT; EPO; JPO	2006/01/30 09:43	
4	BRS	L7	43	(bunch near2 graph) same match\$3	US- PGPUB; USPAT; EPO; JPO	2006/01/30 09:47	
5	BRS	L8	1	7 and fluid	US- PGPUB; USPAT; EPO; JPO	2006/01/30 09:43	
6	BRS	L9	0	(bunch near2 graph) same match\$3 same water	US- PGPUB; USPAT; EPO; JPO	2006/01/30 09:47	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
7	BRS	L10	1	4 and (face\$1 or image\$1)	US- PGPUB; USPAT; EPO; JPO	2006/01/30 10:09	
8	BRS	L11	1	"6301370".pn.	USPAT	2006/01/30 10:10	
9	BRS	L12	1	11 and (locat\$3 near3 feature\$1)	USPAT	2006/01/30 10:11	
10	BRS	L13	0	12 and ((left or right) near3 imaf\$3)	USPAT	2006/01/30 10:11	
11	BRS	L14	1	12 and (first or second or stereo\$6 or left or right)	USPAT	2006/01/30 11:08	
12	BRS	L15	0	12 and (location near2 feature\$1)	USPAT	2006/01/30 10:15	
13	BRS	L16	0	12 and (location near2 (eye\$2 or feature\$1)) same (stereo\$6 or (three adj dimension\$3) or (left near3 image\$1) or (right near3 image\$1))	US- PGPUB; USPAT; EPO	2006/01/30 10:16	
14	BRS	L17	428	(location near2 (eye\$2 or feature\$1)) same (stereo\$6 or (three adj dimension\$3) or (left near3 image\$1) or (right near3 image\$1))	US- PGPUB; USPAT; EPO	2006/01/30 10:21	
15	BRS	L18	65	17 same (graph oear4 (match\$3 or similar\$5))	US- PGPUB; USPAT; EPO	2006/01/30 10:18	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
16	BRS	L19	4	18 same depth	US- PGPUB; USPAT; EPO	2006/01/30 10:19	
17	BRS	L20	43	bunch near2 graph near3 match\$3	US- PGPUB; USPAT; EPO	2006/01/30 10:19	
18	BRS	L22	5	20 same ((locat\$4 or position\$3) near5 (eye\$2 or feature\$1))	US- PGPUB; USPAT; EPO	2006/01/30 10:55	
19	BRS	L23	1	"6272231".pn.	USPAT	2006/01/30 10:57	
20	BRS	L25	8	24 same (locat\$4 or position\$3)	USPAT	2006/01/30 10:57	
21	BRS	L24	22	bunch near2 graph near2 match\$3	USPAT	2006/01/30 11:06	
22	BRS	L26	10	20 same (feature\$1 or eye\$1)	USPAT	2006/01/30 11:06	
23	BRS	L27	21422	(match\$3 or similar\$6) same ((first or second or stereo\$6 or left or right) near5 image\$1)	USPAT	2006/01/30 11:09	
24	BRS	L28	128	27 same graph\$1	USPAT	2006/01/30 11:09	
25	BRS	L29	5	28 same (position\$3 or locat\$4) near5 (eye\$2 or feature\$1)	USPAT	2006/01/30 11:11	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
26	BRS	L30	394	graph near2 match\$3	USPAT	2006/01/30 11:11	
27	BRS	L31	4	30 same stereo\$6	USPAT	2006/01/30 11:14	
28	BRS	L32	1	"6516099".pn.	USPAT	2006/01/30 11:48	
29	BRS	L33	48792	(feature\$1 near5 (locat\$4 or position\$3)) wavelet\$1 same imag\$3 same camera\$1	USPAT	2006/01/30 11:49	
30	BRS	L34	94	33 same (wavelet\$1 near3 transform\$6)	USPAT	2006/01/30 11:49	
31	BRS	L36	1	35 same depth	USPAT	2006/01/30 11:50	
32	BRS	L35	21	34 same ((left or right or first or second or stereo\$6) near10 image\$1)	USPAT	2006/01/30 11:52	
33	BRS	L37	0	((eye\$2 or feature\$1) near2 locat\$4) same wavelet\$1 same (image\$1 near5 camera\$1)	USPAT	2006/01/30 11:53	
34	BRS	L38	24	((eye\$2 or feature\$1) near2 locat\$4) same wavelet\$1	USPAT	2006/01/30 11:53	
35	BRS	L39	18	38 same imag\$3	USPAT	2006/01/30 11:54	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
1	BRS	L1	1	(bunch adj graph adj matching) same (right adj camera) same (feature adj location)	US-PGPUB	2006/01/30 16:07	
2	BRS	L2	1	(bunch adj graph adj matching) and (right adj camera) and ((point\$1 or landmark\$1 or feature or eye\$2) adj location)	US-PGPUB; USPAT	2006/01/30 16:09	
3	BRS	L3	818	((stereo\$6 or (left or right or first or second)) near\$3 image\$1) same (locat\$4 or position\$3) same (feature\$1 or face\$1 or facial or eye\$2 or landmark\$1 or point\$1) same depth	US-PGPUB; USPAT	2006/01/30 16:11	
4	BRS	L4	77	3 same match\$3	US-PGPUB; USPAT	2006/01/30 16:11	
5	BRS	L5	31	4 same dimension\$3	US-PGPUB; USPAT	2006/01/30 16:12	
6	BRS	L6	2	5 and (wavelet\$1 near\$3 transform\$6)	US-PGPUB; USPAT	2006/01/30 16:14	
7	BRS	L7	11	((feature\$1 or eye\$2) near\$2 (locat\$4 or position\$3)) with (wavelet\$1 near\$3 transform\$6)	US-PGPUB; USPAT	2006/01/30 16:14	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
8	BRS	L8	7	7 same image\$1	US- PGPUB; USPAT	2006/01/30 16:33	
9	BRS	L9	37	(left near1 image\$1) same (right near1 image\$1) same ((feature\$1 or eye\$2) near3 locat\$4)	US- PGPUB; USPAT	2006/01/30 16:37	
10	BRS	L10	2	9 same depth	US- PGPUB; USPAT	2006/01/30 16:35	
11	BRS	L11	0	9 same wavelet\$1	US- PGPUB; USPAT	2006/01/30 16:36	
12	BRS	L12	1	9 and wavelet\$1	US- PGPUB; USPAT	2006/01/30 16:36	
13	BRS	L13	1630	(left near1 image\$1) same (right near1 image\$1) same ((feature\$1 or eye\$2) near\$1 locat\$4)	US- PGPUB; USPAT	2006/01/30 16:37	
14	BRS	L14	15	(left near1 image\$1) same (right near1 image\$1) same ((feature\$1 or eye\$2) adj locat\$4)	US- PGPUB; USPAT	2006/01/30 16:42	
15	BRS	L15	639	(left near1 image\$1) same (right near1 image\$1) same camera\$1	US- PGPUB; USPAT	2006/01/30 16:55	
16	BRS	L16	0	15 same (feature\$1 near1 locat\$4)	US- PGPUB; USPAT	2006/01/30 16:44	

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
17	BRS	L17	2	15 same wavelet\$1	US- PGPUB; USPAT	2006/01/30 16:44	
18	BRS	L18	3	deform\$6 same landmark\$1 and mariam	USPAT	2006/01/30 16:46	
19	BRS	L19	1775	locating near2 feature\$1	USPAT	2006/01/30 16:47	
20	BRS	L20	201	19 same image\$1	USPAT	2006/01/30 16:47	
21	BRS	L21	4	20 same depth	USPAT	2006/01/30 16:49	
22	BRS	L22	17	(first adj image) same (second adj image) same wavelet\$1	USPAT	2006/01/30 16:55	
23	BRS	L23	53	stereo\$6 same (locat\$4 near3 feature\$1) same imag\$3	USPAT	2006/01/30 16:56	
24	BRS	L24	1	23 and wavelet\$1	USPAT	2006/01/30 16:51	
25	BRS	L25	6	23 same depth	USPAT	2006/01/30 16:55	
26	BRS	L26	1588	camera adj images	USPAT	2006/01/30 16:55	
27	BRS	L27	13	26 same (left near1 image\$1)	USPAT	2006/01/30 16:58	
28	BRS	L28	0	27 and (locat\$4 near3 feature\$1)	USPAT	2006/01/30 16:57	
29	BRS	L29	40	fluid and (graph near2 match\$3)	USPAT	2006/01/30 16:59	



	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments
30	BRS	L30	22	(bunch near1 graph near2 match\$3)	USPAT	2006/01/30 17:00	
31	BRS	L31	3	30 and (water or flood or fluid)	USPAT	2006/01/30 17:11	
32	BRS	L32	0	fluid same image same (graph adj match\$3)	USPAT	2006/01/30 17:11	

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bunch graph matching eye location image 199

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### Scholarly articles for bunch graph matching eye location image 1999



[The role of topographical constraints in face recognition](#) - by Wiskott - 8 citations

[An Investigation into the use of Partial-Faces for Face ...](#) - by Gutta - 8 citations

[Hierarchical wavelet networks for facial feature ...](#) - by Feris - 17 citations

### [PDF] Face Recognition by Elastic Bunch Graph Matching

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The goal of Elastic **Bunch Graph Matching** on a probe **image** is to find the ...

the **eyes**, and the nose for **location**; tip of the nose, bridge of the nose, ...

[www.face-rec.org/algorithms/EBGM/ WisFelKrue99-FaceRecognition-JainBook.pdf](#) - [Similar pages](#)

### Face Recognition by Elastic Bunch Graph Matching - Wiskott ...

Face Recognition by Elastic **Bunch Graph Matching** (1999) (Make Corrections) (165

citations) ... **Image graph** extraction is based on a novel approach, the . ...

[citeseer.ist.psu.edu/wiskott99face.html](#) - 18k - [Cached](#) - [Similar pages](#)

### Citations: Automatic interpretation and coding of face images ...

The **eye locations** are important for **eye** gaze detectors, and for iris recognition systems. ... 7] to **match** statistical models of object shape to new **images**. ...

[citeseer.ist.psu.edu/context/149316/0](#) - 52k - [Cached](#) - [Similar pages](#)

### [PDF] Face Location by Template Matching with a Quadratic Discriminant ...

File Format: PDF/Adobe Acrobat

(obtained from marking the **eyes** in all face **images** by hand). lies in a certain

region centered ... burg. Face recognition by elastic **bunch graph matching**. ...

[doi.ieeecomputersociety.org/10.1109/RATFG.1999.799217](#) - [Similar pages](#)

### Face Recognition for Smart Environments

The system then (b) matches a given **image** to the face **bunch graph** to find the fiducial points. It creates an **image graph** using elastic **graph matching** and ...

[doi.ieeecomputersociety.org/10.1109/2.820039](#) - [Similar pages](#)

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### [PDF] Facial Feature Location with Delaunay Triangulation/Voronoi ...

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eigenface modeling, elastic **graph matching** (Liao and Li. 2000) and Gabor based

complex filtering ... The precise iris and **eye** or mouth corner **locations** are ...

[crpit.com/confpapers/CRPITV11Xiao.pdf](#) - [Similar pages](#)

### [PDF] The Role of Topographical Constraints in Face Recognition

File Format: PDF/Adobe Acrobat - [View as HTML](#)

jet in the right-eye **bunch**. The face **bunch graph** is matched to the **image graph** once

... **bunch graph**, which yields higher recognition rates than **matching** an ...

[itb1.biologie.hu-berlin.de/~wiskott/ Publications/Wis99a-Topography-PattRecLett.pdf](#) - [Similar pages](#)

### DLMFaceRecognition

... the model faces and the face in the **image**, ie connecting the left **eyes** of ...  
Face Recognition by Elastic **Bunch Graph Matching** (algorithmic version of ...  
itb1.biologie.hu-berlin.de/~wiskott/Projects/DLMFaceRecognition.html - 14k -  
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[\[DOC\] WaveBase: A Facial Feature Detector Using a Superwavelet Face Database](#)

File Format: Microsoft Word - [View as HTML](#)

Figure 1 Candidates for an **eye** corner from a face **image**. We present a system,

... Face recognition by elastic **bunch graph matching**. IEEE Trans. Patt. ...

research.microsoft.com/~jgummell/pubs/WaveBaseTR-2002-05.doc - [Similar pages](#)

[\[PDF\] A Computational Model of the Emergence of Gaze Following](#)

File Format: PDF/Adobe Acrobat - [View as HTML](#)

**image** location gives vector of filter responses: ... **Bunch Graphs. Bunch Graphs.**

Idea: add invariance by labelling **graph** nodes with collection ...

cloudbreak.ucsd.edu/~triesch/courses/275vision/lectures/objects.pdf - [Similar pages](#)

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[www.ecse.rpi.edu/~qji/Papers/frgc\\_eye.pdf](#) - Jan 28, 2006 - [Similar pages](#)[PCA\(Principle Component Analysis\)](#)[EBGM\(Elastic Bunch Graph Matching\) ... Face Detection from Color Images using a Fuzzy Pattern Matching Method - Me Th Od \(Correct\) ...](#)[www.cc.gatech.edu/grads/k/kihwan23/thesis\\_face.htm](#) - 127k - [Cached](#) - [Similar pages](#)[\[Paper\] Wavelet based Normalisation for Face Recognition](#)[\[7\] L. Wiskott, JM Fellous, N. Kruger, C. Von der Malsburg, Face recognition by elastic bunch graph matching, IEEE Transactions on Pattern Analysis and ...](#)[www.actapress.com/PDFViewer.aspx?paperId=16974](#) - [Similar pages](#)[\[PDF\] 1449 1449..1453](#)File Format: PDF/Adobe Acrobat - [View as HTML](#)the two-dimensional **image location**. The responses of several such ... Recognition by Elastic **Bunch Graph Matching**, IEEE Trans. Pattern ...[cloudbreak.ucsd.edu/~triesch/publications/TriMat-PAMI2001.pdf](#) - [Similar pages](#)[NHK Laboratories Note No. 487](#)For the Bayesian MCMC system, we used a sample of 20 **images** from the "talking" ... C., "Face Recognition by Elastic **Bunch Graph Matching**," Technical Report ...[www.nhk.or.jp/str/publica/labnote/lab487.html](#) - 42k - [Cached](#) - [Similar pages](#)[\[PDF\] arXiv:cs.CV/0509081 v1 27 Sep 2005](#)File Format: PDF/Adobe Acrobat - [View as HTML](#)Detection of **eye locations** in. unconstrained visual **images**. In IEEE International Con- ... Face recognition by elastic **bunch graph matching**. IEEE ...[arxiv.org/pdf/cs.CV/0509081](#) - [Similar pages](#)[\[PDF\] Hierarchical Wavelet Networks for Facial Feature Localization](#)File Format: PDF/Adobe Acrobat - [View as HTML](#)face **image**. tion is imprecise because the face-eye relationship varies ... Face recognition by elastic **bunch graph matching**. IEEE. Trans. Patt. ...[research.microsoft.com/~JGemmell/pubs/FerisFG2002.pdf](#) - [Similar pages](#)[\[PDF\] Image Analysis for Face Recognition](#)File Format: PDF/Adobe Acrobat - [View as HTML](#)3.1.2 Elastic **Graph Matching**. To identify a new face, the face **graph** is positioned on the face **image** using elastic **bunch graph matching**. ...[www.face-rec.org/interesting-papers/General/ImAna4FacRcg\\_lu.pdf](#) - [Similar pages](#)

[PDF] [Personalizing Smart Environments: Face Recognition for Human ...](#)

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Given an **image** the face is. matched to the face **bunch. graph** to find the fiducial ... recognition the others require approximate **eye locations** to operate. ...

[vismod.media.mit.edu/tech-reports/TR-516.pdf](http://vismod.media.mit.edu/tech-reports/TR-516.pdf) - [Similar pages](#)

[PS] [Personalizing Smart Environments: Face Recognition for Human ...](#)

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Given an **image** the face is matched to the face **bunch graph** to find the fiducial points. An **image graph** is created using elastic **graph matching** and compared ...

[vismod.media.mit.edu/tech-reports/TR-516.ps.Z](http://vismod.media.mit.edu/tech-reports/TR-516.ps.Z) - [Similar pages](#)

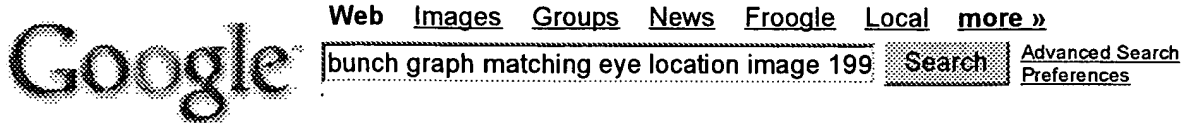


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### December 1999 : Content Aware Intelligent Web Graphics

Some report types use the static **image** technology of JPEG and GIF, to display "business **graphs**" and also tables when it is important to prevent unauthorized ...

[www.infoloom.com/gcaconfs/WEB/philadelphia99/ddodds.HTM](http://www.infoloom.com/gcaconfs/WEB/philadelphia99/ddodds.HTM) - 26k - [Cached](#) - [Similar pages](#)

### [PDF] Detection of Facial Landmarks from Neutral, Happy, and Disgust ...

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**Image** processing, face segmentation, detection of local oriented edges, Gaussian, facial landmarks, human- ... **bunch graph matching**. IEEE Trans. on Pattern ...

[wscg.zcu.cz/wscg2005/Papers\\_2005/Full/K59-full.pdf](http://wscg.zcu.cz/wscg2005/Papers_2005/Full/K59-full.pdf) - [Similar pages](#)

### A face **location** and recognition system based on tangent distance

... C. von der Malsburg, Face recognition by elastic **bunch graph matching**, ...

10 Huang W. and Mariani R. Face Detection and Precise **Eyes Location**. ...

[portal.acm.org/citation.cfm?id=779207](http://portal.acm.org/citation.cfm?id=779207) - [Similar pages](#)

### [PDF] A system for object class detection

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Model **image**. Model **graph** on cluster map. Best **matching graph** ... been declared an object **location**. We use the **image** database provided by Caltech ...

[homepages.inf.ed.ac.uk/rbf/CAVIAR/PAPERS/Hall04\\_cogvis.pdf](http://homepages.inf.ed.ac.uk/rbf/CAVIAR/PAPERS/Hall04_cogvis.pdf) - [Similar pages](#)

### [PDF] An efficient method to detect facial fiducial points for face ...

File Format: PDF/Adobe Acrobat

This method has been tested on 2500 **eye sub-images** ... well known approaches such as the Elastic **Bunch Graph. Matching** [8], the PCA [6], or LDA [9], ...

[dx.doi.org/10.1109/CPR.2004.1334190](http://dx.doi.org/10.1109/CPR.2004.1334190) - [Similar pages](#)

### [PDF] AN AUTOMATIC FEATURE-BASED FACE RECOGNITION SYSTEM Stefano Arca ...

File Format: PDF/Adobe Acrobat - [View as HTML](#)

Given an **eye sub-image**, at first the iris is localized, ... Face recognition by elastic **bunch. graph matching**. In LC Jain et al., editor, In- ...

[homes.dsi.unimi.it/~campadel/Articoli/WIAMIS2004.pdf](http://homes.dsi.unimi.it/~campadel/Articoli/WIAMIS2004.pdf) - [Similar pages](#)

### [PDF] AN AUTOMATIC FEATURE-BASED FACE RECOGNITION SYSTEM Stefano Arca ...

File Format: PDF/Adobe Acrobat - [View as HTML](#)

Given an **eye sub-image**, at first the iris is local-. ized, allowing to initialize the **eye template** in ... proaches such as the Elastic **Bunch Graph Matching** ...

[homes.dsi.unimi.it/~lanzarot/Articoli/WIAMIS2004.pdf](http://homes.dsi.unimi.it/~lanzarot/Articoli/WIAMIS2004.pdf) - [Similar pages](#)

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### [PDF] Model Selection via Predictive Explanatory Power

File Format: PDF/Adobe Acrobat - [View as HTML](#)

To find the **locations** of the features of an object in an **image**, ... by hierarchical **graph matching**. In Proceedings of the IJCNN International Joint ...

[www.lce.hut.fi/~tttammin/seq\\_techrep.pdf](http://www.lce.hut.fi/~tttammin/seq_techrep.pdf) - [Similar pages](#)

[PDF] [Deformable face mapping for person identification - Image ...](#)

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elaborated on the idea with the Elastic **Bunch Graph Matching** ... used the coordinates of the **eyes** and the tip of the nose provided. with each **image**. ...

[scl.ece.ucsb.edu/pubs/pubs\\_B/b03\\_2.pdf](http://scl.ece.ucsb.edu/pubs/pubs_B/b03_2.pdf) - [Similar pages](#)

### Visualization and Presentation Subsystem

**Image graphs** of new faces are extracted by an elastic **graph matching** process ...

For example, a map shows all matched geographical **locations** when a video ...

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